```
from sklearn.svm import SVC
import numpy as np
import matplotlib.pyplot as plt
from sklearn import svm, datasets
import pandas as pd
from sklearn.model selection import train test split
from sklearn.svm import SVC
from matplotlib import pyplot as plt
%matplotlib inline
import io
import sys
import pandas as pd
from google.colab import files
uploaded = files.upload()
bankdata= pd.read_csv(io.BytesIO(uploaded['bill_authentication.csv']))
     Choose Files | bill authentication.csv
     • bill_authentication.csv(application/vnd.ms-excel) - 46442 bytes, last modified: 5/10/2021 - 100% done
     Saving bill_authentication.csv to bill_authentication (1).csv
bankdata.shape
     (1372, 5)
bankdata.head()
```

	Variance	Skewness	Curtosis	Entropy	Class
0	3.62160	8.6661	-2.8073	-0.44699	0
1	4.54590	8.1674	-2.4586	-1.46210	0

Data Preprocessing

Data preprocessing involves (1) Dividing the data into attributes and labels and (2) dividing the data into training and testing sets.

```
X = bankdata.drop('Class', axis=1)
y = bankdata['Class']
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size = 0.20)
```

Trining data

→ Data prediction

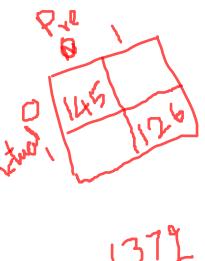
```
y_pred = svclassifier.predict(X_test)
```

Evaluating the Algorithm

from sklearn.metrics import classification_report, confusion_matrix
print(confusion_matrix(y_test,y_pred))
print(classification_report(y_test,y_pred))

[[145 2] [2 126]]				
	precision	recall	f1-score	support
0	0.99	0.99	0.99	147
1	0.98	0.98	0.98	128
accuracy			0.99	275
macro avg	0.99	0.99	0.99	275
weighted avg	0.99	0.99	0.99	275

Double-click (or enter) to edit



137]